L. E. Perrier
Texaco USA
PO Box 1476
Bakersfield, CA 93302
805 325 4800

REVISED MARCH 1986

June 6, 1985

Ms. Dina Villari
Characterization and Assessment Division
Office of Solid Waste
U. S. Environmental Protection Agency
401 "M" Street, SW
Washington, DC 20460

Certified Mail #P 536 609 969

Re: RCRA Section 3007 Questionnaire

Dear Ms. Villari:

In response to Ms. Claussen's letter dated March 29, 1985 and received at this location on April 11, 1985 regarding the subject questionnaire, please find enclosed our completed response. Please note that, pursuant to my letter of April 23, 1985 to Ms. Eileen Claussen, Mr. Ben Smith provided a two-week extension; with this extension, this questionnaire is due by June 10, 1985.

Although Texaco continues to believe that much of the requested information is beyond the authority of the Environmental Protection Agency to require under Section 3007 of the Federal Resource Conservation and Recovery Act, it is voluntarily providing such information without waiver of its objections. We have determined that the data supplied within the questionnaire on the following pages are to be treated as confidential trade secrets pursuant to 5 USC 552 & 40 CFR Part 2:

1. Page 2-4, Question 2, General Refinery, Information

2. Page 5-6, Question 3, Process Flow Diagram

3. Page 9, Table 3, Response to Question 4

The data specified above is justified to be treated as trade secret information because it is proprietary operational data which provides production rate and capacities/capabilities. Such information is essential to Texaco's production and marketing strategies and, therefore, its public disclosure would be of value to our competitors. We have submitted the material in the required fashion to be given confidentiality by your agency

and its contractors. Should your agency not grant confidential treatment, Texaco requests that those portions of the questionnaire designated as confidential be immediately returned. Additionally, Texaco further requests notification in the event a third party or another governmental agency or unit requests any portion of this response.

Very truly yours,

L. E. Perrier

L. E. Perrier

GAT/LEP/jas
Enclosure
132/85

bcc: RAC, Houston
JAW, Los Angeles
GAT-ASL

5/8

OMB No. 2050-0042
Expiration Date: June 30, 1987

RCRA SECTION 3007 QUESTIONNAIRE
Petroleum Refining Industry

Return within 45 days from date of receipt to:

Ms. Dina Villari
Waste Characterization and Assessment Division (WH-562)
Office of Solid Waste
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

1. Corporate/Plant Data

A. Name of Corporation Texaco Refining and Marketing Inc.

B. Address of Corporation Headquarters

Street 1111 Rusk Avenue

City Houston State Texas Zip 77002

C. Name of Plant Bakersfield Plant

D. Address of Plant

Street 6451 Rosedale Highway

City Bakersfield State California Zip 93308

Hazardous waste generator ID number: CAD099457087

E. Mailing Address of Plant (if different from above)

P. O. Box 1476, Bakersfield, CA 93302

F. Name(s) of personnel to be contacted for additional information pertaining to this questionnaire:

Name	Title	Telephone
Gordon A. Turl	Supervisor, Environmental Health & Safety	805/326-4265
A. Sue Luft	Environmental Engineer	805/326-4426

2. General Refinery Information

A. Crude Information

1. Please provide the refinery's 1983 crude feed capacity in barrels per calender day (bpcd), and in barrels per stream day (bpsd).

Refinery's Capacity [redacted] bpcd

bpsd

2. Give the representative assay for each of the major crudes (feedstocks) processed during 1983 by supplying the information requested in Table I. Submit one assay for each major crude (feedstock). Examples of major crudes are Alaskan North Slope, Arabian Light, or Minas.

B. Product Information

Please provide representative product yields for 1983 by completing Table II. Include all finished products (i.e., fuels, coke, lube oils, waxes, asphalt, petrochemicals, sulfur and special products).

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TABLE I - Response to Question 2

(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed

Crude Name*	[redacted]
Source (location)	
Percent of 1983 Crude Charge	
Type (e.g. naphthenic, paraffinic)	
API Gravity	
Total Sulfur, % wt%	
Total Nitrogen, %wt%	
BS&W vol%	
Metals, ppm	
Nickel	
Vanadium	
Other EP Toxic Metals, if available (i.e., As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	

*May use composite assay for pipeline crude.

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TABLE II - Response to Question B

Products	1983 Total Production (Specify units)* (Thousands of Barrels)
Motor Gasoline:	
Finished Leaded	[redacted]
Finished Unleaded	
Distillate Fuel Oil	
Residual Fuel Oil	
Still Gas: Other Use	
Normal Butane/Butylene: Petrochemical Use	
Miscellaneous Products - Non-Fuel Use	
TOTAL PRODUCTS	

*Production figures as reported to Department of Energy on EIA-810, Monthly Refinery Reports.

3. Process Flow Diagram

Please provide a general process block flow diagram that identifies all refinery inputs, outputs, and major unit operations. Indicate the types and points of introduction of feedstocks. Indicate the types and points of generation of products, coproducts and residuals*. Assign each residual a unique Residual Identification Number (RIN) and indicate its point of generation with an arrow. Include the following as residuals:

(1) Residuals generated by unit operations (e.g., FCC sour water, spent catalysts, FCC clarified oil sludge, coke fines). Separate RIN's should be provided for each of the types of unit operations requiring a catalyst (e.g. heavy gas oil desulfurization and catalytic cracker feedstock treating would each have a single RIN for their catalysts even though several units might be involved).

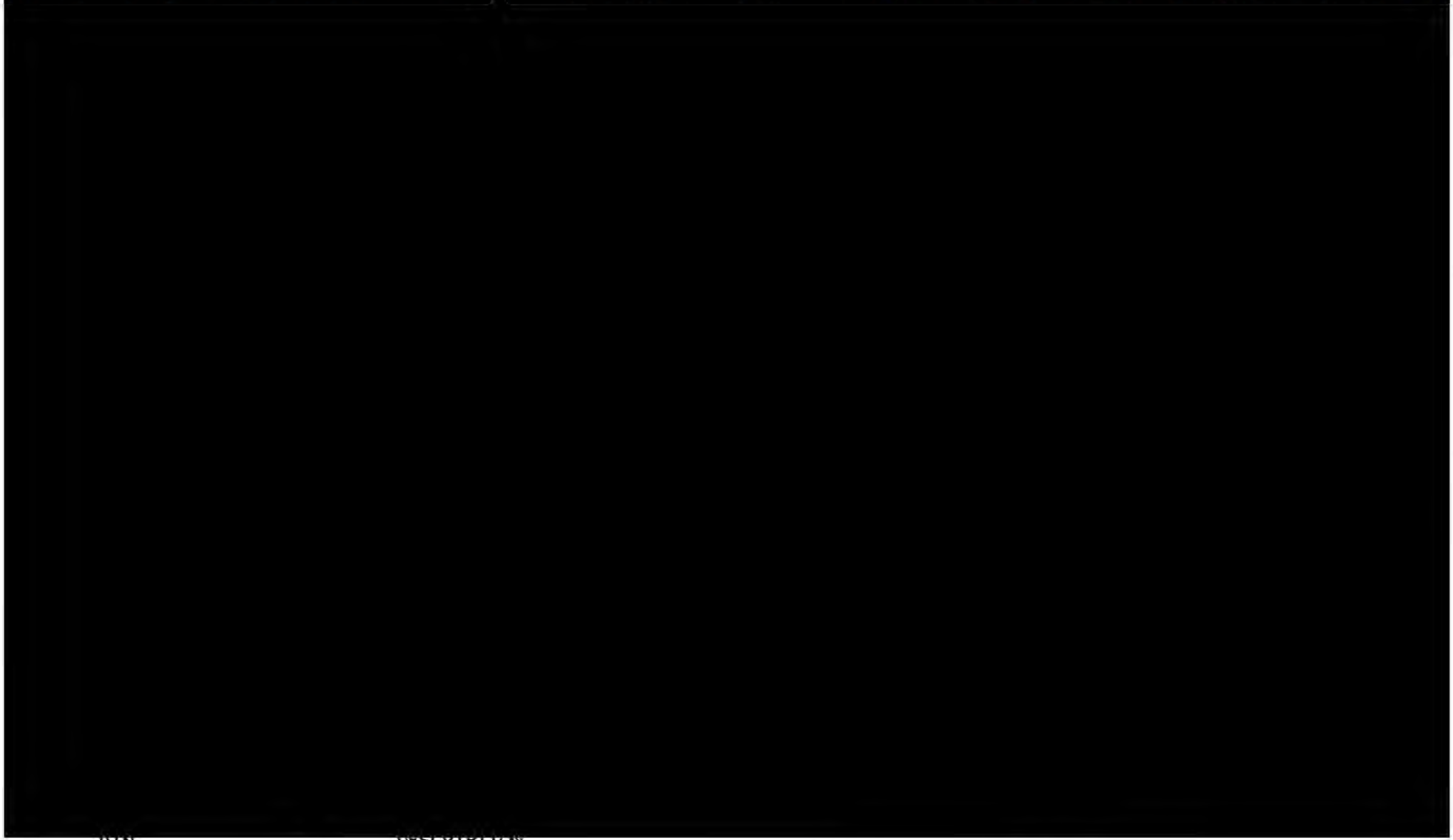
(2) Residuals generated during unit operations which produce/recover coproducts and solvents (e.g., spent Stretford solution from removal of acid gas.)

(3) Residuals generated during final treatment (e.g., slop oil emulsion and solids, cooling tower basin sludge solids from blowdown treatment).

A sample block flow diagram is presented on the following page (Example II). More complex refineries may want to provide separate diagrams broken out by major processing areas (e.g., crude, light hydrocarbon, cracking and reforming, lubes, residuals processing).

*Residuals include any stream generated during the manufacture of a product which is not used as a raw material or principally sold as a commercial product. Residuals may be solids, liquids, and unconfined gases generated by the management of solid and liquid residuals. For the purpose of this questionnaire, spent catalysts, coke fines, spent alkylation acid, process unit sour waters, and spent caustics are examples of residuals. Items such as product coke and bunker fuel that contain catalyst fines are considered products.

(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed



RIN	DESCRIPTION
(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed	

REFINERY BLOCK FLOW DIAGRAM

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(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed

(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed

WASTE WATER TREATMENT
BLOCK FLOW DIAGRAM

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4. Unit Processes

Complete Table III for each of the units presented in the refinery flow diagram of Question 3. This table requires throughput and licensing information, along with a list of residuals generated in each unit. List the RIN for each residual from the flow diagram in the previous question.

Provided below is a categorization of refinery operations to be used in completing Table III. The majority of your plants' operations will fall into one of these categories; however, this list is not meant to be inclusive. If an operation at the plant does not fall under one of the categories provided, list the operation with as descriptive a process name as possible and complete Table III.

PROCESS CATEGORIES

(The following operations require throughput information based on charge)

1. Crude Desalting
   a. Electrostatic
   b. Chemical
   c. Combination
2. Crude Distillation
   a. Atmospheric tower
   b. Vacuum tower
3. Thermal Processes
   a. Gas oil cracking
   b. Thermal cracking
   c. Visbreaking
   d. Coking (fluid)*
   e. Coking (delayed)*
   f. Other (list)
4. Residual Upgrading
   a. Residuum oil supercritical extraction
   b. Solvent decarbonizing
   c. Asphalt residual treatment
   d. Deasphalting: propane, butane
   e. Other (list)
5. Cat cracking
   a. Fluid
   b. Thermofor
   c. Houdriflow
6. Cat Reforming
   Semiregenerative
   Cyclic
   Other (list)
7. Cat Hydrocracking
   a. Distillate upgrading
   b. Residual upgrading
   c. Lube-oil manufacturing
   d. Other (list)
8. Cat Hydrorefining
   a. Residual desulfurization
   b. Heavy gas-oil desulfurizing
   c. Cat-cracker & cycle stock feed pretreatment
   d. Middle distillate
   e. Other (list)
9. Cat Hydrotreating
   a. Pretreating cat reformer feeds
   b. Naphtha desulfurizing
   c. Naphtha olefin or aromatics saturation
   d. Straight-run distillate
   e. Other distillate (list)
   f. Lube oil "polishing"
   g. Other (list)

(The following operations require throughput information based on production)

10. Light Hydrocarbon Processing
    a. Alkylation
       Sulfuric acid
       Hydrofluoric acid
    b. Polymerization
    c. Dimersol
    d. MTBE
    e. Other (list)
11. Aromatics/Isomerization
    a. Udex process
    b. BTX
    c. Hydrodealkylation
    d. Cyclohexane
    e. C_4 feed
    f. C_5 feed
    g. C_5 & C_6 feed
    h. Other (list)
12. Lube Oil Processing
    a. Solvent Extraction: furfural, phenol, Duosol, n-Methyl-2-Pyrrolidone, other
    b. Solvent Dewaxing: MEK, propane, Di-Me, other
    c. Greases
    d. Clay filtering
    e. Other (list)
13. Sulfur Complex and H_2S Removal Facilities
    a. Sulfur recovery units* (The following operations require throughput information based on charge)
    b. Amine regeneration units: MEA, DEA, TEA
    c. Tail gas treating unit
    d. Sour water stripper
    e. Gas scrubbers (Fuel gas & light hydrocarbons): crude distillation cat cracker, hydrotreaters, gas plants, other
14. Auxiliary Operations
    a. Sweetening Treatments: Linde, Mericat, Merox, other (list)
    b. Extraction Processes: kerosene clay treaters Merifining, Merox, Napfining/Thiolex, other (list)
    c. Sulfuric Acid Treatment: straight run gasoline cracked gasoline kerosene lubricating-oil stocks cylinder stocks other (list)
15. Hydrogen (Production in MMcfd)
    a. Steam methane reforming
    b. Steam naphtha reforming
    c. Partial oxidation
    d. Cryogenic
    e. Other (list)

*Provide charge information and short tons per day of production.

Capacity information should be clearly marked as charge or production. If a process at the plant was idle during 1983, indicate this in the column provided for the calendar day rate.

An example is provided on the following page (Example III).

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Table III - Response to Question 4

Process	Stream Day Capacity as of 1983 - bbls	Calendar Day Rate for 1983 - bbls	Licensor of Process	Licensed Process Name	Wastes Generated (with BIN from Flow Diagram)

(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed

[redacted]

5. Other Inputs

A. Solvents

Please list any process solvents used during 1983 and the total amount used (in pounds). Examples of solvents are methyl ethyl ketone (MEK), furfural, and phenol.

	Solvents	Process*	1983 Consumption (tons)
Example:	MEK	Lube Oil Dewaxing	E
	NONE - Not Applicable		

Key for 1983
Consumption Amounts

A = <1 ton
B = 1-10 tons
C = 11-100 tons
D = 101-1000 tons
E = 1001-10,000 tons
F = >10,000 tons

*From Table III

6. Waste Treatment

A. Does the refinery separate storm and process wastewaters?

____ Yes X No

B. What is the refinery's average daily dry weather wastewater flow from:

From Refinery Operation:	187,200 gal/day
From Petrochemical:	NA gal/day
From Other Sources: (e. g. other plants, municipalities, etc.):	NA gal/day
From Cooling Towers:	21,600 gal/day
From Boilers:	24,500 gal/day

C. Please provide a general process block flow diagram for the refinery's wastewater treatment system. Indicate the types and points of introduction/generation of all inputs and residuals. For the wastewater treatment plant inputs, utilize the residual identification numbers (RIN) assigned in the refinery block flow diagram if possible, or assign a new, unique, sequential RIN to each additional wastewater treatment plant inputs such as heat exchanger bundle cleaning wastewaters. Note that characterization of individual sour water streams generated throughout the refinery are not of interest in this study; however, the combined effluent from the plants sour water strippers are of concern and should be included in the block flow diagram. All residuals generated in the wastewater system units should also be assigned a RIN. Indicate the residuals point of generation with an arrow. If the refinery uses oily-water separators in parallel, these should be shown as a single unit on the diagram. The block flow diagram should also include not only process area oily-water separators, but storage area oily-water separators as well. A typical block flow diagram for the sample refinery presented in Question 3 is presented on the following page (Example IV).

D. Coke Fines Handling

1. Does the refinery have a Delayed Coking Unit?

____ Yes X No

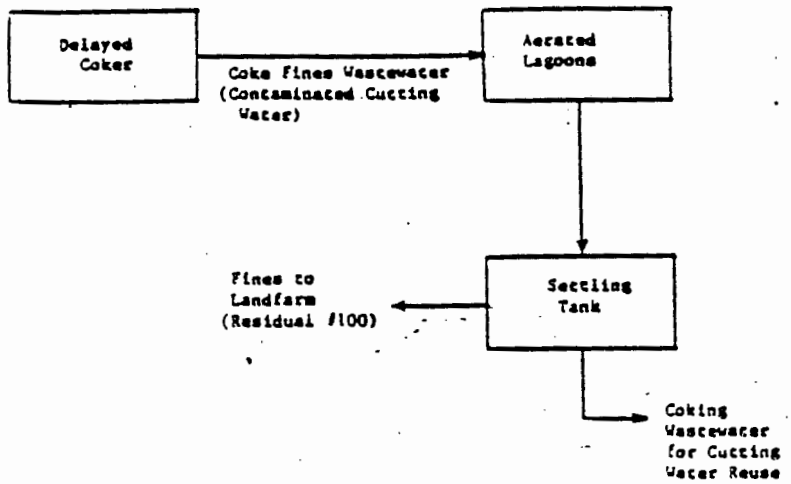
If the answer to Question 1 is yes, please complete the following; if no, proceed to Question E on the next page.

2. Please provide a block flow diagram of the coke fines handling system which clearly shows the steps used to separate the fines from the cutting water. An example block flow diagram is presented on page 13 (Example V).

3. As indicated in Example V, the solid waste coke fines should be assigned RIN 100. This number should be used in completing Table IV. Indicate on the diagram whether tanks or surface impoundments are used for the solid/liquid settling.

4. How are the coke fines managed? _____

Example V - Response to Question 6.D
Coke Fines Handling



E. Slop Oil System

1. Does the refinery collect residuals in a slop oil tank?

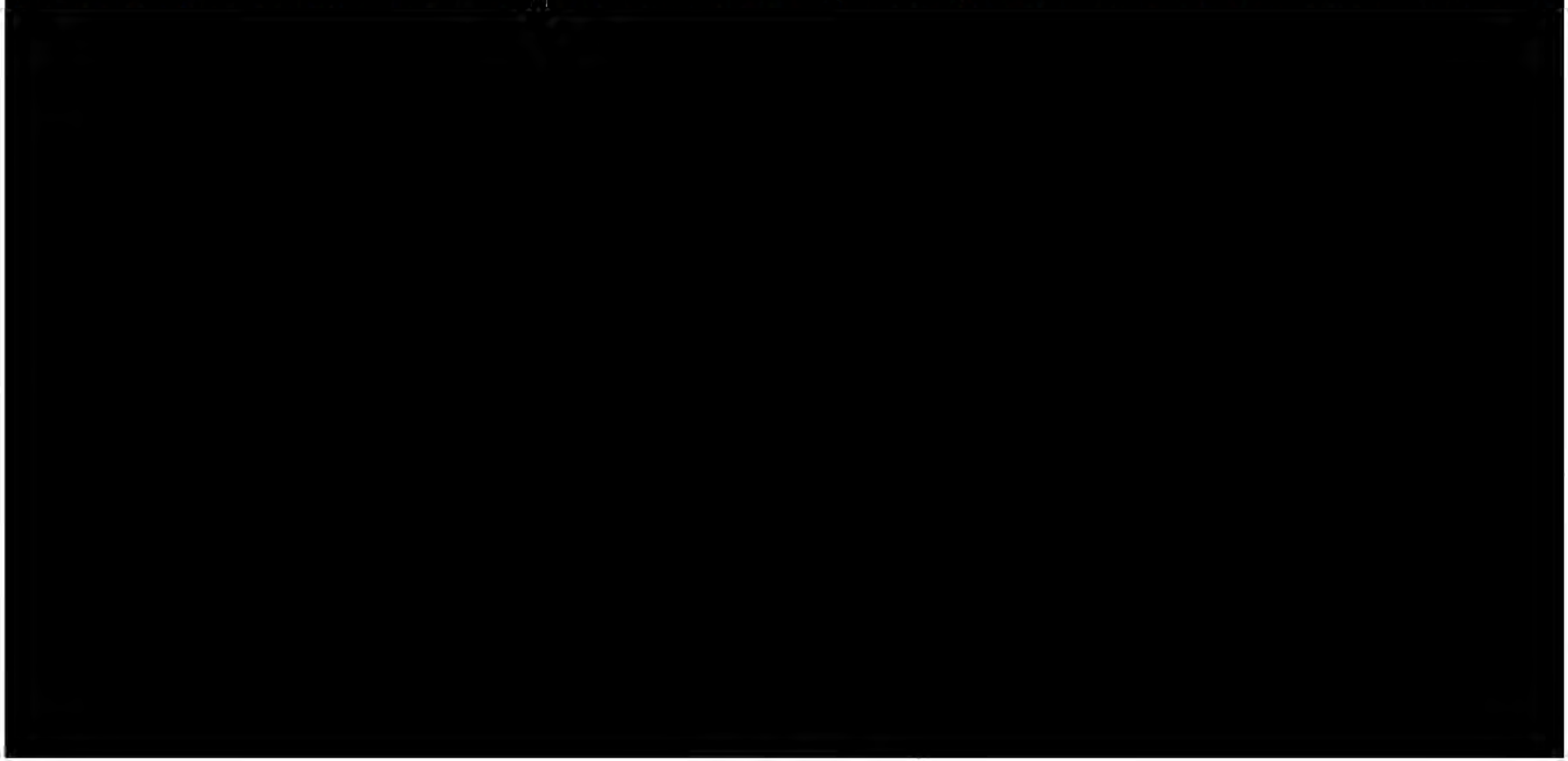
X Yes _____ No

If the answer to Question 1 is Yes, please complete the following; if No, proceed to Question F on the next page.

2. Please provide a block diagram of the refinery slop oil system. An example block flow diagram is presented on the following page (Example VI).

3. As indicated in Example VI, Slop Oil Emulsion should be assigned Residual Identification Number 101, and the Slop Oil Sludges should be assigned RIN 102 Those numbers should be used in completing Table IV.

(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed

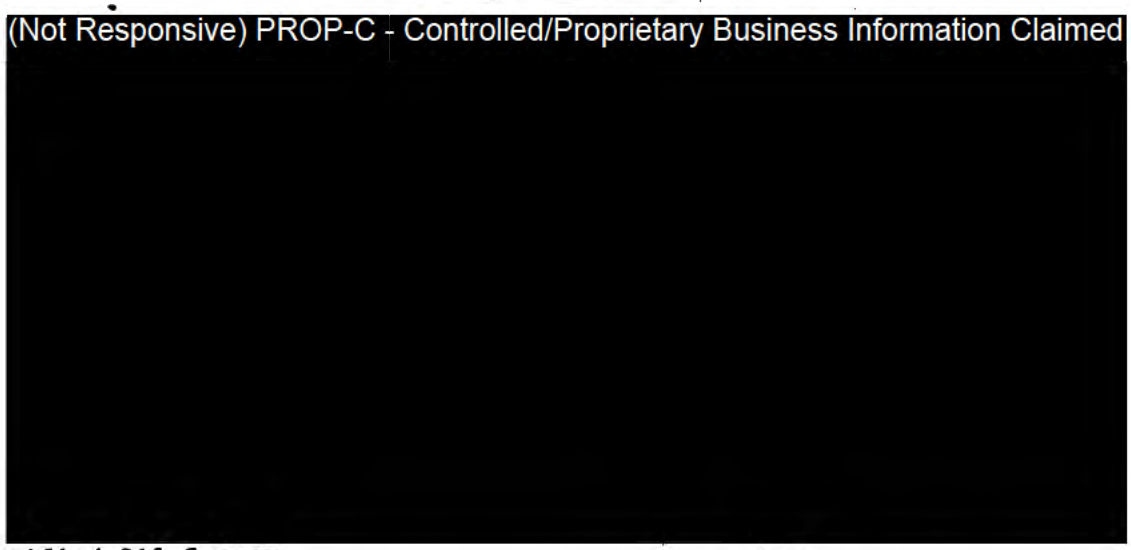


SLOP OIL SYSTEM

COMPANY CONFIDENTIAL

EXAMPLE VI - Response to Question 6.E
Slop Oil System

(Not Responsive) PROP-C - Controlled/Proprietary Business Information Claimed



F. Clarified Oil System

1. Are the tower bottoms from the Catalytic Cracking Unit main fractionator routed to a storage tank(s) (i.e. clarified oil, decant, or cutter) for settling out of catalyst carry-over? Not Applicable***

N/A _____ Yes _____ No

2. Indicate by checkmark(s) the cleaning methods used to remove the clarified oil sludge from the storage/settling tanks.

Naphtha Rinse ____ Chemical Wash ____ Water Cutting ____

specify chemicals _____

Assign the generated sludge the RIN number 103 for use in Table IV.

G. Tube Bundle Cleaning

1. Indicate the methods used for cleaning tube bundles at the plant:

acid wash ____ water lancing or drilling X back flush ____

other ____ (specify _____)

2. Do you have a central tube bundle cleaning area? Yes

3. How many exchangers were cleaned at the central tube bundle cleaning area in 1983? 47

4. If there is a sludge pit in the Bundle Cleaning area, assign RIN 104 to Tube Bundle Cleaning Sludge generated and complete Table IV.

H. Crude and Product Tank Cleaning

	Crude Storage		Unleaded Gasoline	Leaded Gasoline	Fuel Oils*
	With Mixers	Without Mixers			
Number of tanks	2	4	7	3	2
Total Storage Capacity	106,000	317,000	225,000	98,600	22,000
Average Cleaning Frequency (in years)	10	15	20	20	10

Assign Crude Storage Tank Bottoms a Residual ID # of 105 included in Table IV

Assign RIN of 106

Assign RIN of 107

*Fuel Oils responses should address #6 or Bunker fuels

7. Residuals Characterization Information

Residuals of various types were identified in questions 3, 4, 5, and 6. The purpose of the question is to provide a general characterization of those residuals. Specific instructions for the completion of the columns in Table IV follow. Table IV is to be completed for all residuals that were assigned a Residual Identification Number (RIN) in questions 3, 4, 5 or 6, except as noted in the column A instructions. An example is provided in Example VII. Specific Column Instructions follow:

A. Use the RIN assigned in questions 3, 4, 5 or 6. Do not complete this column, or the rest of Table IV, for:
- Desalter Brine
- Process Sour Waters
- Ballast Water
- Pump Gland Water
- Tank Farm Waters
- Boiler Water Blowdown
- Sanitary Wastes
- Storm Water
- Cooling Tower Blowdown
- Oils Sent to Slop Oil System

B. Specify the residual category in accordance with the following codes:

Code	Categories of Residuals
C1	Tank Bottom Sludges
C2	Spent Catalysts (solid and liquid)
C3	Spent Caustics (includes Merox)
C4	Process Sludges (e.g., Clarified Oil, Desalter, and HF Alkylation)
C5	Spent Solvents
C6	Fines (e.g., Coke and FCC)
C7	Off-Spec. Product Treating Solutions (e.g., Stretford)
C8	Treating Clay
C9	Air Flotation Unit Float
C10	Heat Exchanger Bundle Cleaning Sludge
C11	Biological Treatment Sludge
C12	Process Decantates
C13	Process Area and Treatment Plant Separator Sludges
C14	Off-spec products (e.g., coke, sulfur)
C15	Other (specify)

C. Specify management methods in accordance with codes provided. If a residual is subject to a sequence of methods (e.g., storage in a tank, incineration), list the methods in sequence. If a residual is handled alternatively by more than one method (e.g., either incinerated or burned in a boiler), identify the alternate methods.

Code	Management Methods
M1	Storage or treatment in: (specify) a. tank b. container c. surface impoundment
M2	Burning in a boiler
M3	On-site recovery: a. coker b. catalytic cracker c. atmospheric distillation d. replacement catalyst for other unit e. other (specify)
M4	Incineration
M5	Landfill
M6	Underground Injection
M7	Landfarm
M8	On-site wastewater treatment
M9	Discharge to publicly owned wastewater treatment works
M10	Discharge to surface water under NPDES
M11	Discharge to off-site privately owned wastewater treatment works
M12	Sales
M13	Sludge thickening
M14	Pressure Filtration Centrifuging
M15	In-situ cleaning with: a. steam b. distillates b. chemicals d. water
M16	Shipment Off-Site (specify facility in Table V) a. reclamation b. treatment c. disposal
M17	Other (specify)

D. If the residual has been identified in the facility RCRA notification, indicate whether it was identified as ignitable (I), corrosive (C), reactive (R), or EP toxic (E), or listed by EPA or reported by the facility as toxic (T), or acutely hazardous (H).

E. For each residual, describe the following properties when available: physical state [e.g., liquid (specify whether aqueous or organic), solid, slurry (indicate solids contents), tar, gas]; pH; flash point; BTU content; viscosity; toxicity.

F. Indicate the amount of each residual managed by each method in 1983 (specify units), except for discharges to a publicly owned treatment works (POTW) or to surface water under a NPDES permit. One digit of significance in estimating waste amounts is acceptable.

G. List the compounds which are known by analysis to be present in the residual and specify, as known, the concentration ranges as follows:

Code	Range
A	> 50%
B	> 10% to 50%
C	>1% to 10%
D	>0.1% to 1%
E	0.01% to 0.1%
[Actual concentration]*	<0.01%

H. If residual analyses are not available, list the compounds which are expected to be present in the residual based on chemical engineering principles and the expected concentration, if known.

I. Specify whether the residual described is generated continuously or cyclicly. For the purpose of this questionnaire, residuals are considered to be generated when they are removed from the process units. Wastewater treatment residuals are considered to be generated (for the purposes of this questionnaire) when they are removed from the treatment device. If the residual is generated cyclicly specify how frequently the residual has been generated and provide your best estimate of the next month/year that it will be generated.

*If concentration is less than 0.01%, specify, if known, typical concentration in ppm.

Table IV - Response to Question 7

A Residual Identification Number	B Residual Code	C Management Code	D RCRA Identification (I, C, R, E, T, or H)	E Properties of Residual	F 1983 Residual Quantities	G Known Compounds, Concentration Ranges	H Other Expected Compounds	I Frequency of Generation
2	C2	M1b M16a or M16c	--	Solid	6 Tons	Mo-B Ni-C Al_2O_3-A	Carbon Sulfur	Cyclic (2 Yrs.) (9/85)
3	C2	M1b M16a	--	Solid	0	Pt-D Re-D Al_2O_3-A	Carbon Sulfur	Cyclic (> 5 Yrs.)
4	C2	M1b M16A or M16c	--	Solid 1	0	Mo-B Ni-C Al_2O_3-A	Carbon Sulfur	Cyclic (5-10 Yrs.)
5	C2	M1b M16a	--	Solid	0	Pt-D Re-D Al_2O_3-A	Carbon Sulfur	Cyclic (> 10 Yrs.)
6	C2	M1b M16a or M16c	--	Solid	0	CoO-C MoO_3-B Al_2O_3-A	Carbon Sulfur	Cyclic (1 Yr.) (9/85)
7	C2	M1b M16c	--	Solid	0	Al_2O_3-A SiO_2-E Fe_2O_3-E Na_2O -D	Sulfur Carbon Ammonia Salts	Cyclic (3 Yrs.)

*Attach additional sheets as necessary.

(6/87)

Table IV - Response to Question 7

A Residual Identification Number	B Residual Code	C Management Code	D RCRA Identification (I,C,R,E,T, or H)	E Properties of Residual	F 1983 Residual Quantities	G Known Compounds, Concentration Ranges	H Other Expected Compounds	I Frequency of Generation
8	C7	M8 M6	--	Liquid	5.05 Million Gallons	NH_4-D SO_3-D HSO_3-D S_2O_3-E SO_4-C Water-A		Continuous
10	C13	M16, M16b,c		Liquid	1.6 Tons	MEA (Monoethanolamine) -A Water - B H_2S-D		Cyclic (6 Mo.-1 Yr.)
11	C15	M1b M16C	--	Solid (w/filters)	1 Cubic Yard	(Currently being analyzed)	Iron Sulfide	Cyclic (1 Mo.)
19	C13	M1a ~~M3c~~ M16b,c	I, T	Sludge	144 Tons	Water -A Oil-B Sediments-B Sulfides-20ppm		Cyclic
22	C15	M1b M16c	--	Solid (w/filters)	160 Cubic Yards	Oil-C Zinc-D Chromium-E Copper-E Nickel-E Vanadium-E	Iron	Cyclic (Weekly)

*Attach additional sheets as necessary.

Table IV - Response to Question 7

A Residual Identification Number	B Residual Code	C Management Code	D RCRA Identification (I,C,R,E,T, or H)	E Properties of Residual	F 1983 Residual Quantities	G Known Compounds, Concentration Ranges	H Other Expected Compounds	I Frequency of Generation
24	C15	M8 M6	-	Liquid	No Data	No Data (Injected w/other process wastewaters)		Cyclic (6 Mo.-1 Yr.)
102	C13 M1a	M16b,c or M2	T	Sludge	188 Tons	Water-A Oil-B Sediments-B Sulfides-E		Cyclic (5 Yrs.) **
104	C10	M1b ~~M16b,c~~ M16b,c	T	Sludge	1 Cubic Yard	Oil-B Iron-C Water-B Zinc-D Nickel-D Cobalt-D	Molybdenum Vanadium Barium Antimony Lead Chromium	Cyclic (6 Mo.-1 Yr.)
105	C1	M16b,c	May be T	Sludge	0	Oil-B Water-A Sediment-B Sulfur-D		Cyclic (10-15 Yrs.) **
106	C1	M16b,c	T	Sludge	0	Gasoline-B Water-A Sediment/ Scale-B	Organic Lead in Leaded Gasoline Tanks- 1-100 ppm	Cyclic (20 Yrs.) **

*Attach additional sheets as necessary.

** Frequency per tank.

Table IV - Response to Question 7

A Residual Identification Number	B Residual Code	C Management Code	D RCRA Identification (I,C,R,E,T, or H)	E Properties of Residual	F 1983 Residual Quantities	G Known Compounds; Concentration Ranges	H Other Expected Compounds	I Frequency of Generation
107	C1	M16b,c	--	Sludge	291 Tons	Oil-B Water-A Sediment-B Sulfur-D		Cyclic (10 Yr) **
101	C15	M1a M2 or M16b,c	T	Emulsion	(No data)	Oil - B Water Solids - A or B		Cyclic (6 mo)
108 (Cooling tower sludge)	C15	M16b,c	(unknown)	Sludge 1	0	(unknown)		Cyclic (≥10 yrs)

*Attach additional sheets as necessary.

** Frequency per tank.

Table V - Off-Site Facilities Handling Refinery Wastes
(1983-Present)

Name of Facility: Chemical Waste Management, Inc.
Kettleman Hills Facility
Residual Identification Numbers: 7, 10, 11, 19, 22, 102, 104, 105, 106, 107, 108, 4, 6, 2, 101
Facility Mailing Address:

Street or P.O. Box: P. O. Box 471

City or Town: Kettleman City

State: California Zip: 93239

Facility Location (if different from above):
35251 Old Skyline Road

City or Town: Kettleman City

State: California Zip: 93239

Hazardous Waste Facility ID Number (if any):
CAT000646117

Name of Facility: Chemical Waste Management, Inc.
Bakersfield Facility
Residual Identification Numbers: 22
Facility Mailing Address:

Street or P.O. Box: P. O. Box 5716

City or Town: Bakersfield

State: California Zip: 93388

Facility Location (if different from above):
Round Mountain Road

City or Town: Bakersfield

State: California Zip:

Hazardous Waste Facility ID Number (if any):
CAT000624056
(facility now closed)

*Attach additional sheets as necessary.

Table V - Off-Site Facilities Handling Refinery Wastes

Name of Facility: Environmental Protection Corporation - Westside Facility
Residual Identification Numbers: 105

Facility Mailing Address:

Street or P.O. Box: 3040 19th Street, Suite 10

City or Town: Bakersfield

State: California Zip: 93301

Facility Location (if different from above):
7 miles north of Taft off Highway 33 and 2 miles north of Fellows

City or Town:

State: California Zip:

Hazardous Waste Facility ID Number (if any):
CAT080010283

(facility now closed)

Name of Facility: Gulf Chemical & Metallurgical Company
Residual Identification Numbers: 23, 6, 4, 5

Facility Mailing Address:

Street or P.O. Box: P. O. Box 2130

City or Town: Texas City

State: Texas Zip: 77590

Facility Location (if different from above):
302 Midway Road

City or Town: Freeport

State: Texas Zip: 77541

Hazardous Waste Facility ID Number (if any):
--

*Attach additional sheets as necessary.

Table V - Off-Site Facilities Handling Refinery Wastes

Name of Facility: Catalyst Recovery, Inc.

Residual Identification Numbers: 3, 4, 2, 5, 6

Facility Mailing Address:

Street or P.O. Box: 104 South Stone Avenue

City or Town: La Grange

State: Illinois Zip: 60525

Facility Location (if different from above): --

City or Town: _____

State: _____ Zip: _____

Hazardous Waste Facility ID Number (if any): --

Name of Facility: Hall Chemical Company

Residual Identification Numbers: 2, 6, 3, 4, 5

Facility Mailing Address:

Street or P.O. Box: P. O. Box 197

City or Town: Wickliffe

State: Ohio Zip: 44092

Facility Location (if different from above): _____

City or Town: Arab

State: Alabama Zip: _____

Hazardous Waste Facility ID Number (if any): --

*Attach additional sheets as necessary.

8. Surface Impoundments*

Have identified residuals been stored, treated, or disposed of in an on-site surface impoundment at any time since January 1, 1983? ___ Yes XX No

If yes, complete Table VI.

*A surface impoundment is defined as holding, storage, settling, and aeration pits, ponds, or lagoons formed primarily of earthern materials.

Table VI - Response to Question 8

If more than 8 surface impoundments have been used since January 1, 1983 to manage identified residuals, provide information only on the 8 impoundments with the largest capacities. Use Residual Identification Numbers to identify residuals. If you do not know whether a liner has been installed, circle both "Yes" and "No." If you do not know the thickness of a liner, indicate "UNK" for unknown.

					Synthetic Liner			Clay Liner			Leachate Collecti System	
Impound-ment	Residuals Disposed RIN	Total Capacity (Gallons)[1]	Storage or Disposal (specify)	Specify Treatment Type if Applicable[2]	Installed	Thickness (mils)	No. of Liners	Installed	Thickness (in)	No. of Liners	Installed	Leacha Gener
1					Yes No			Yes No			Yes No	Yes
2					Yes No			Yes No			Yes No	Yes
3					Yes No			Yes No			Yes No	Yes
4					Yes No			Yes No			Yes No	Yes
5					Yes No			Yes No			Yes No	Yes
6					Yes No			Yes No			Yes No	Yes
7					Yes No			Yes No			Yes No	Yes
8					Yes No			Yes No			Yes No	Yes

[1]Use the following code to designate the quantity of residual(s) in storage on any day in 1983:

A >550 to 5,500 gallons
B >5,500 to 55,000 gallons
C >55,000 to 550,000 gallons
D >550,000 gallons

[2]Use the following codes to specify treatment type:

A Neutralization
B Settling/Clarification
C Aeration
D Equalization
E Mixing
F Evaporation
G Other (specify)

9. Land Treatment

Have identified residuals been managed in an on-site land treatment operation at any time since January 1, 1983? ___ Yes XX No

If yes, provide the following information:

A. Year land treatment initiated at site: _____

B. Year land treatment of identified residuals initiated: _____

C. What was the total area actively used for land treatment in 1983? _____ acres

D. What is the depth in feet from the ground surface to the seasonal high water table for each of your landfarms? _____

E. Check method(s) used to apply residuals to the land treatment site:

a. ___ Surface spreading or spray irrigation without plow or disc incorporation. Indicate residuals applied in this manner using Residual Identification Numbers: _____

b. ___ Surface spreading or spray irrigation with plow or disc incorporation to a depth of _____ (specify). Indicate residuals applied in this manner using Residual Identification Numbers: _____

c. ___ Subsurface injection to a depth of _____ (specify). Indicate residuals applied in this manner using Residual Identification Numbers: _____

d. ___ Other methods (specify method and residuals): _____

_____

_____

F. Which of the following descriptions applies to your ground water monitoring well situation?

a. ___ There are no ground water monitoring wells strictly for any landfarm.

b. ___ RCRA required monitoring is performed.

c. ___ Ground water monitoring is performed, but not as a RCRA requirement.

d. ___ RCRA monitoring is performed at one or more landfarms, and ground water monitoring is performed at one or more other landfarms, but not as a RCRA requirement.

G. Indicate how many wells are being used to monitor your landfarms in the following categories:

a. ___ RCRA - upgradient

b. ___ RCRA - downgradient

c. ___ Non-RCRA - upgradient

d. ___ Non-RCRA - downgradient

H. Have you installed any lysimeters within any of your landfarms?
____ Yes ____ No

If yes, how many lysimeters have been installed? _____

In general, how frequently are the lysimeters sampled?

a. ___ Less than once per year

b. ___ Annually

c. ___ Semi-annually

d. ___ Quarterly

e. ___ Monthly

f. ___ Other (specify) _____
_____
_____

I. For <u>all</u> landfarm <u>upgradient</u> well samples, (RCRA or non-RCRA) during the period of August 1981 to the present (or calendar 1981, if ground water monitoring starting on or before the first quarter 1981) provide an aggregate average concentration for the following parameters.

TOC _____

Chromium - Total _____

Chromium - Hexavalent _____

Lead _____

J. For all landfarm downgradient wells, (RCRA or non-RCRA) during the period of August 1981 to the present (or calendar 1981, if ground water monitoring started on or before the first quarter of 1981), provide an aggregate average concentration for the following parameters.

TOC _____

Chromium - Total _____

Chromium - Hexavalent _____

Lead _____

10. Landfills

1. Have identified residuals been landfilled on-site at any time that you owned or operated this facility? X Yes ___ No Note: Land disposal was done in the past and constituents which may remain are being investigated in accordance with requirements of California Regional Water Quality Control Board.

   If yes, answer questions 2 and 3.

2. Has any on-site landfill (or landfill cell) that was used to dispose of identified residuals been closed (i.e., no longer used to dispose of wastes)?
   X Yes ___ No NOTE: See above note at Question 1. Landfill ceased operating prior to 1980. RCRA closure to be pursued, if applicable.

   If yes, complete Table VII.

3. Have any identified residuals been landfilled on-site at any time since January 1, 1983 in a cell that has not been closed? ___ Yes X No

   If yes, complete Table VIII.

Table VII - Response to Question 10.2

Closed Landfill Cells

If more than 5 cells containing identified residuals have been closed, provide information only on the 5 cells that were most recently closed. Use Residual Identification Numbers to identify residuals. If you do not know whether a layer or liner was installed, circle both "Yes" and "No". If you do not know the thickness of a layer or liner, indicate "UNK" for unknown.

A. Cap/Cover Design

		Drainage Layer			Cap Design Clay Liner		Synthetic Liner		
Cell	Residuals Disposed (RIN)	Installed	Material	Thickness (in)	Installed	Thickness (in)	Installed	Material	Thickness (mils)
1	Unknown	(Yes) (No)	Unknown	Unknown	(Yes) (No)	Unknown	(Yes) (No)	Unknown	Unknown
2		Yes No			Yes No		Yes No		
3		Yes No			Yes No		Yes No		
4		Yes No			Yes No		Yes No		
5		Yes No			Yes No		Yes No		

B. Bottom Liner Design/Leachate Collection

Cell	Residuals Disposed (RIN)	Synthetic Liner: Installed	Synthetic Liner: Material	Synthetic Liner: Thickness (mils)	Synthetic Liner: No. of Liners	Clay Liner: Installed	Clay Liner: Thickness (in)	Clay Liner: No. of Liners	Leachate Collection System: Installed	Leachate Collection System: Leachate Generated
1	Unknown	(Yes) No	Unknown	Unknown	Unknown	(Yes) No	Unknown	Unknown	(Yes) No	(Yes) No
2	____	Yes No	____	____	____	Yes No	____	____	Yes No	Yes No
3	____	Yes No	____	____	____	Yes No	____	____	Yes No	Yes No
4	____	Yes No	____	____	____	Yes No	____	____	Yes No	Yes No
5	____	Yes No	____	____	____	Yes No	____	____	Yes No	Yes No

Table VIII - Response to Question 10.3

Landfill Cells Used to Dispose of Identified Residuals at any Time Since January 1, 1983

If more than 5 cells containing identified residuals have been closed, provide information only on the 5 cells that were most recently closed. Use Residual Identification Numbers to identify residuals. If you do not know whether a layer or liner was installed, circle both "Yes" and "No". If you do not know the thickness of a layer or liner, indicate "UNK" for unknown.

Bottom Liner Design/Leachate Collection

	Synthetic Liner			Clay Liner			Leachate Collection System	
Cell No. (As Assigned (Above)	Installed	Thickness (mils)	No. of Liners	Installed	Thickness (in)	No. of Liners	Installed	Leachate Generated
1	Yes No			Yes No			Yes No	Yes No
2	Yes No			Yes No			Yes No	Yes No
3	Yes No			Yes No			Yes No	Yes No
4	Yes No			Yes No			Yes No	Yes No
5	Yes No			Yes No			Yes No	Yes No

11. Part B Status

List for your various waste management operations the date when your Part B permits were requested or provide an estimate of when you expect to be called.

Operation	Date
Landfills	--
Landfarms	--
Incineration	--
Surface Impoundment	--

12. Incineration

Have identified residuals been incinerated on-site at any time since January 1, 1983? ☐ Yes ☒ No

If yes, provide the following information for each incinerator:

1. Incinerator type:

Type	Incinerator Capacity (Heat Input in MMBtu/hr.)	Feed Type	Percentage of Auxiliary Fuel Required (Heat Input Basis)
☐ Liquid injection ☐ Rotary kiln ☐ Hearth ☐ Other _____ (specify)	☐ ≤10 million ☐ >10 million to 100 million ☐ >100 million	☐ Liquid – nozzle type _____ (specify) ☐ Atomizing pressure _____ (specify) ☐ Solid ☐ Batch charge ☐ Continuous charge	_____

2. Combustion Chamber Design Parameters:

	Primary Chamber	Secondary Chamber
Combustion Chamber Temp.	_____ °C	_____ °C
Location of Temp. Monitor	_____	_____
Residence Time	_____ (sec)	_____ (sec)

3. If the incinerator is equipped with an air pollution control device, specify the type(s) of device(s):

☐ Scrubber ☐ Electrostatic precipitator ☐ Other (specify) _____

4. Are incinerator stack emissions data available? ☐ Yes ☐ No

5. Provide the following information for each of the residuals burned:

Residual No.[1]	Feed Rate (lbs. per hour)	Typical BTU Content (BTU/lb)	Typical Total Ash Content (% by wt.)	Typical Total Halogen Content (% by wt.)	Total Water Content (% by wt.)

[1] Use Residual Identification Numbers to identify residuals.

13. Burning in a Boiler

Have identified residuals been burned in an on-site boiler at any time since January 1 1983? ☐ Yes ☒ No

If yes, provide the following information for each boiler:

1. Boiler and fuel type:

Type	Boiler Capacity (Heat Input in Million Btu/hr)	Primary Boiler Fuel	Percentage of Fuel Replaced by Residuals (Heat Input Basis)	Typical Boiler Load When Firing Residual (% of Capacity)	Boiler Temperature (°C) Inlet	Outlet
☐ Fire tube	☐ ≤10 million	☐ Oil	☐ ≤5%	☐ ≤50%	___	___
☐ Water tube	☐ >10 million to 100 million	☐ Gas	☐ >5-10%	☐ >50-75%		
		☐ Coal	☐ >10-25%	☐ >75%		
	☐ >100 million	☐ Wood or other	☐ >25-50%			
			☐ >50%			

2. Provide the following information for each of the residuals burned:

Residual No.[1]	Feed Rate (lbs. per hour)	Typical BTU Content (BTU/lb)	Typical Total Ash Content (% by wt.)	Typical Total Halogen Content (% by wt.)	Total Water Content (% by wt.)

[1]Use Residual Identification Numbers to identify residuals.

3. Provide the following information on the total feed mixture when residual is burned:

Feed Rate (Pounds per hour) _____

Typical BTU Content (BTU/lb) _____

Typical Total Ash Content (% by wt.) _____

Typical Total Halogen Content (% by wt.) _____

Typical Total Water Content (% by wt.) _____

4. If the boiler is equipped with an air pollution control device, specify the type of device:

☐ Scrubber ☐ Electrostatic precipitator ☐ Other (specify) _____

5. Are residual-burning stack emissions data available? ☐ Yes ☐ No